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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/868,351

10/02/2001

Julian Charles Carter

C1043/7033

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11/10/2003

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WASHINGTON, DC 20005

EXAMINER

THOMPSON, CAMIE S

ART UNIT

PAPER NUMBER

1774

DATE MAILED: 11/10/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/868,351

Applicant(s)

CARTER ET AL.

Examiner

Camie S Thompson

Art Unit

1774

-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-8, 10, 14, 15, 23-26, 56, 57 and 60-68 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10, 23-26, 61, 63-64 is/are allowed.
- 6) ☒ Claim(s) 5-8, 14, 15, 60, 62, 65, 67 and 68 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. Applicant's amendment and accompanying remarks filed August 21, 2003 have been acknowledged.
2. Examiner acknowledges amended claims 5-8, 10, 14-15, 24 and 56-57.
3. Examiner acknowledges cancelled claims 1-4, 11-13, 16-22, 27-55 and 58-59.
4. Examiner acknowledges newly added claims 60-68.
5. The objection to claim 11 is withdrawn due to applicant's cancellation of claim 11.
6. The rejection of claims 1-21, 23-41 and 43-58 under 35 U.S.C. 112, second paragraph is withdrawn due to applicant's amended and cancelled claims.
7. The rejection of claims 1-2 and 10-11 under 35 U.S.C. 102(b) as being anticipated by Tang, U.S. Patent Number 5,482,896 is withdrawn due to applicant's cancelled and amended claims.
8. The rejection of claims 1-2 and 10-11 under 35 U.S.C. 102(b) as being anticipated by Codama, U.S. Patent Number 6,091,078 is withdrawn due to applicant's cancelled and amended claims.
9. The rejection of claims 27-34 and 36-58 under 35 U.S.C. 103(a) as being unpatentable over JP 08-008065 is withdrawn due to applicant's cancelled and amended claims.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Art Unit: 1774

Claim 66 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 66 is rendered indefinite because there is no thickness amount recited.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 5-8, 14-15, 60, 62, 65 and 67-68 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 08-008065.

The Japanese reference discloses a thin-film electroluminescent element wherein the light emissive layer comprising an organic layer is disposed between first and second electrodes for injection carriers into the light-emissive layer (see Figures 1 and 2). The reference also discloses that the first electrode layer is adjacent to the surface of the light-emissive organic layer remote from the other of the first and second electrodes and the first electrode layer comprises a high resistance material such as gallium nitride and a ductile metal such as silver as per instant claims 5 and 7-8 and 67-68 (see paragraphs 17-19). The Japanese reference also discloses that the first electrode layer has a low work function as per instant claim 6 (see paragraph 24). Additionally, the reference discloses that at least one of first and second electrode is opaque and comprises a

Art Unit: 1774

plurality of layers (see Figure 2) and a thin first electrode layer comprises a low work function adjacent to the surface of the light-emissive organic layer remote from the other first and second electrodes (see paragraph 25) as per instant claims 13 and 15. The reference also discloses that the thin first electrode layer comprises a high work function as per instant claims 14 (see paragraph 24). Paragraph 33 and 42 of the reference discloses that the first electrode layer has a thickness greater than the light emissive layer and is in the range 0.5 to 1 micron as per instant claims 5 and 57. The reference also discloses that the high resistance material can be germanium, the low work function element can be lithium and the insulator material can be a nitride or LiF as per instant claim 56 (see pages 2-3). The resistivity of the low work function electron is a physical property of the first and second electrode and is thus an inherent property as per instant claims 60, 62 and 65. Inherently, it would be expected that the resistivity be $10^2 - 10^5$ Ohm cm.

13. Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

14. Claims 10, 23-26, 61 and 63-64 are allowed.

Response to Arguments

15. Applicant's arguments filed August 21, 2003 have been fully considered but they are not persuasive. Applicant argues that the Japanese reference is concerned with improving the contrast of the device wherein the instant invention is concerned with dealing with the defects in the light emissive layer. The use of the device is not given patentable weight. The device of the

Art Unit: 1774

Japanese reference has a thin-film electroluminescent element wherein the light emissive layer comprises an organic layer disposed between the first and second electrode, as do the instant claims. Applicant argues that the instant claims specify the use of an electrode having a thickness of at least 5 microns. Paragraph 33 of the reference discloses an electrode with a thickness of 5 nm (0.5 microns). Applicant argues that the Japanese reference does not teach the resistivity of an electrode layer. The resistivity of the LiF is a physical property of the material. Thus, the resistivity would inherently be $10^2 - 10^5$ Ohm cm. Applicant argues that the reference does not teach a high resistant electrode. The reference uses a LiF electrode, as does the applicant. Therefore, both electrodes would be expected to act in the same manner. Therefore, it would be expected that the LiF electrode of the reference would have high resistance just as the instant invention would.

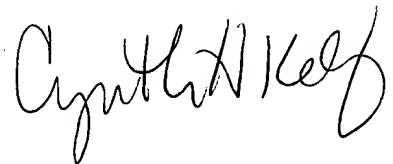
16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 1774

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (703) 305-4488. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly, can be reached at (703) 308-0449. The fax phone number for the Group is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

CYNTHIA H. KELLY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

A handwritten signature in black ink, appearing to read 'Cynthia H. Kelly', is written over the printed name and title.